Instructions for Supplemental Permit Application Form
INCINERATORS

(Instructions for completing Form No. DEP-AIR-APP-203)

All applicants for a permit for a stationary source, as defined in Section 22a-174-1 of the Regulations of Connecticut State Agencies (RCSA), must complete the appropriate supplemental application forms to provide information to quantify the emissions from each source or point of emissions which makes up that stationary source.

This supplemental application form must be completed for any new or modified incinerator. An incinerator is any device, apparatus, equipment, or structure used for destroying, reducing, or salvaging by fire any material or substance including, but not limited to, refuse, rubbish, garbage, trade waste, debris or scrap, foliage, municipal sludge, or human or animal remains. Examples of incinerator types are: small single-chamber, multiple-chamber, rotary kiln incinerators; pathological/medical waste incinerators; crematories; and landfill flares. Note: if an afterburner is being installed as control equipment, the Air Pollution Control Equipment form (DEP-AIR-APP-210) is to be used instead.

Please complete a separate form for each incinerator. (You may reproduce this form as necessary.) Complete each item as appropriate. If a particular item does not apply to your situation mark it N/A (not applicable). If additional space is needed to answer a question stated in the application, attach separate sheet(s) as necessary, clearly identifying the applicant name, form name and item number, and unit number. *Attach a process flow diagram indicating all units, air pollution control equipment and stacks, as applicable. See a sample process flow diagram in the main instructions (DEP-AIR-INST-200) for guidance. Also, attach documentation of waste heat contents and waste analysis.*

You must also complete the Air Pollution Control Equipment form (DEP-AIR-APP-210) to provide details of the air pollution control equipment used, the Stack Parameters form (DEP-AIR-APP-211) to provide parameters of the stack(s) associated with each unit, *and* the Unit Emissions form (DEP-AIR-APP-212) to provide emission rates of each unit.

Note: The data provided in these forms (such as maximum anticipated fuel usage, maximum operating hours, etc.) will be used to define the operating limits in your permit.

Unit Number: Identify the reference or unit number assigned to the incinerator. Use the same numbering system that was used in completing Part I: Application Type of the form "Permit Application for New Source Review Stationary Sources of Air Pollution" (DEP-AIR-APP-200). Please use a consistent reference number for each incinerator throughout the application package. Please complete a separate form for each incinerator.

Indicate ("Yes" or "No") whether the unit is subject to Title 40 of the Code of Federal Regulations (CFR) Part 60, New Source Performance Standards (NSPS) or Title 40 CFR Part 63, Maximum Achievable Control Technology (MACT). If the answer is yes to either Part 60 or Part 63, please specify the appropriate subparts.

Complete Sections I-III for incinerators.
Complete Sections I-IV for landfill flares.
Specify applicable units.

Section I: General

1,2. *Manufacturer, Model and Serial Number* - List *the* manufacturer, model number and serial number of the incinerator. This information is specified by the manufacturer and can often be found on the equipment nameplate. If unknown, this information can be obtained from the manufacturer.

3. *Construction Date - List* the unit's actual or anticipated construction date. Please refer to the definition of ABegin actual construction@ in RCSA Section 22a-174-1 in order to properly complete this item.

4. *Hourly Rated Capacity* - Indicate the incinerator's maximum hourly rated capacity in pounds charged per hour or tons charged per hour. This information is specified by the manufacturer and can often be found on the equipment nameplate. If unknown, this information can be obtained from the manufacturer.

5. *Incinerator Type* - Check the appropriate type of incinerator. If other, specify type.

6. *Maximum Quantity of Waste Burned* - Estimate the maximum anticipated quantity of waste to be burned in tons per year, tons per day, and pounds per hour.

7. *Maximum* Daily *and Annual Operating Schedule* Estimate your maximum *operating* schedule in hours per day, and hours per year.

8. *Gas Flow Rate* - Indicate the maximum anticipated gas flow rate in scfm.

9. *Combustion Temperature* - Specify the combustion temperature in ^{o}F. This is a function of the design and the heat content of the gas.

10. *Residence Time - Specify the gas residence time in sec*onds.

11. *Overall Destruction Efficiency* - Indicate the destruction efficiency (e.g., the expected percentage of carbon from the ultimate *analysis* which has been converted to carbon dioxide (CO_2) in the exhaust).

Section II: Waste Content

1. *Heat Content and Percentage of Total* Amount *to be Burned* - For each type of waste to be combusted, specify the heat content per unit of waste and specify the measurement units, e.g., BTU per pound. Submit documentation of waste heat contents. Also, for each type of waste, estimate its percentage of the total amount to be burned on a weight basis.

2. *Waste Material Ultimate Analysis* - For the total waste to be burned, indicate the percentages (by weight on a dry basis) of carbon, nitrogen, sulfur, oxygen, ash, fluorine, *chlorine* and any other element. Please specify other elements if present, e.g. halogens. Submit documentation of the waste analysis (e.g., chemical lab analysis).

Section III: Auxiliary Burners

Note: Items #1 a-d are specified by the incinerator manufacturer.

1a. *Maximum Design Heat Input* - Indicate each burner's maximum design hourly heat input in BTU/hour. This information is specified by the manufacturer and can often be *found* on the equipment nameplate. If unknown, this information can be obtained from the manufacturer.

1b. *Primary or Secondary?* - Designate the burners as primary or secondary.

1c. *Fuel Types - For the incinerator's primary and secondary* auxiliary burners, list all fuel types to be used (e.g., natural gas).

1d-f. *Percent Sulfur, Ash and Nitrogen* - For each *fuel* to be used, list the percent sulfur, ash, and nitrogen contents by weight on a dry basis. These can be *obtained* from your fuel dealer.

1g. *Maximum Hourly Fuel Usage* - For each fuel to be used, estimate the maximum anticipated hourly fuel usage rates and specify the measurement units, e.g., MMcf/hour. If *additional* space is needed to answer this item, attach a separate sheet, as necessary, clearly identifying the applicant name, form name and item number, and unit number.

1h. *Maximum Annual Fuel Usage* - For each fuel to be used, estimate the maximum anticipated annual fuel usage rates and specify the measurement units, e.g., MMcf/year. If additional space is needed to answer this item, attach a separate sheet, as necessary, clearly identifying the applicant name, form name and item number, and unit number.

Section IV: Landfill Flares (Only)

1. *Gas Flow Rate* - Indicate the maximum anticipated landfill gas flow rate to the flare in scfm.

Information for items 2-7 can be obtained from the manufacturer.

2. *Flare Design* - Check if the flare is an open, i.e. elevated design, or enclosed, i.e., ground design.

3. *Combustion Temperature* - Specify the flare's combustion temperature in ^{o}F. This is a function of the flare design and the heat content of the landfill gas.

4. *Residence Time* - Specify the gas residence time in seconds.

5,6. *Flare Height and Distance to Property Line* Specify the flare discharge height from ground and horizontal distance to nearest property line in feet.

7. *Destruction Efficiency* - Indicate the destruction efficiency (e.g., the expected *percentage* of carbon from the ultimate analysis which has been converted to carbon dioxide (CO_2) in the exhaust).